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**User Manual
Lift/Test Cap
180-2192-HV0**



User Manual Lift/Test Cap 180-2192-HV0

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Revision History

Issue, Release Date	Description
Rev A, 16 Oct 2008	Initial Issue
Rev B, 26 May 2009	Modified with Angled NPT Port



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Safety

WARNING: Trapped air requires considerable time to compress and when it is compressed is highly dangerous. It has enough stored energy to separate parts with considerable force.

All pressure equipment has a particular pressure rating and care must be taken to ensure that no item is used in a situation that may cause its working pressure to be exceeded.

All personnel involved in pressure testing must be formally trained, and wearing the appropriate PPE

The lifting eye has a safe working load of 12 tonnes

This equipment and the equipment it is attached to is heavy never position yourself below a suspended load



1 Introduction

1.1 General

The Lift/Test cap is designed to allow the pressure testing and lifting of equipment.

This user manual serves as an introduction to the equipment and contains the relevant specifications, operation, planning and maintenance instructions, parts list and drawings.

1.2 Product Identification

Phuel products are identified by a unique serial number that facilitates full product traceability. Each product is supplied with a documentation pack that contains product certification and material/inspection reports. The serial number is always etched on the surface of the product but can sometimes be difficult to find or read after painting. A customer identification number is also included to allow the customer to track the asset in their system.

The nameplate tag is secured to the top of the Cap and is stamped with the information shown below. This tag should be located in the first instance to ensure that this manual refers to the correct equipment.

PHUEL OIL TOOLS LTD
DESCRIPTION & SIZE
CUSTOMER ID No
PHUEL ID No 06-XXX-XX
MWP & SERVICE
TEST DATE

2 Technical Specification

Part Number	180-2192-HH0
Connection	11 1/2" – 4 Otis Type 1/2" NPT
Maximum Working Pressure (MWP)	10,000 Psi
Working Load Limit (WLL)	12 Tonne
Height	11.93"
Diameter	13"
Weight	197 lbs
Service	H2S

Table 1: Technical Data

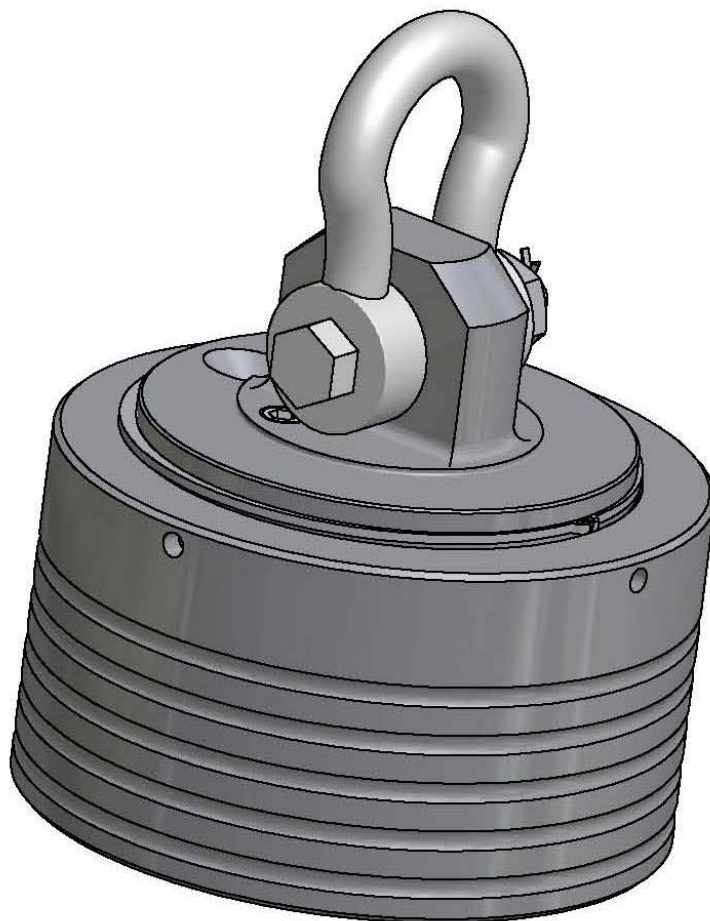


Figure 1: Lift Test Cap

3 Technical Description

The Lift/Test cap is used in conjunction with other equipment to allow the pressure testing and lifting of various components. It is used to blank off the equipment and also allow the bleeding off of air during the set up procedure for testing.

4 Operation

All operations to be carried out by suitably qualified and competent personnel

- Attach Lift/Test cap to blank off open end of equipment under test
- Fill equipment under test with appropriate test fluid bleeding off any air
- Test equipment using procedure laid down in appropriate user manual

4.1 Pre Job

- Check maintenance record sheet to ensure the equipment has been maintained by competent personnel
- Check all certification is in date
- Ensure equipment to be tested does not exceed the maximum working pressure or the safe working load
- Ensure 'O' ring is seated correctly and there are no signs of damage
- Ensure threads are clean
- Inspect for signs of damage/defect

4.2 During Job

- Ensure no leaks form equipment

4.3 Post Job

- Inspect for signs of damage
- Inspect 'O' ring for seating and signs of damage (replace if required with appropriate item from redress kit)
- Ensure threads are clean

5 Maintenance

All maintenance to be carried out by suitably qualified and competent personnel

5.1 Introduction

Regular maintenance of the equipment using Phuel redress kits or Phuel approved parts is essential to its continued safe operation. Ensure that the pre and post job operating procedures are followed and that maintenance records are kept.

5.2 Schedule

The maintenance schedule may be governed by international or company standards and the following is considered to be the minimum requirements.

5.2.1 Pre & Post Job

Refer to Section 4.1 and Section 4.3 for details

5.2.2 6 Monthly

- Carry out a thorough inspection of the Lift/Test Cap and Shackle reporting any signs of defect

5.2.3 Yearly

- Disassemble Lift Test Cap (see 5.5.1) clean and degrease all components
- Inspect the condition of all sealing surfaces and surface coatings
- Re-coat threads and sealing surfaces if necessary. If in doubt contact Phuel Oil Tools Ltd
- Replace all elastomeric seals with items from redress kit (see spares Table 4)
- Regrease components
- Re-assemble (see 5.5.2)
- Pressure test to maximum working pressure in accordance to testing procedure (see 6)
- Inspect paint work and repair as necessary

5.2.4 Five Yearly

- Yearly Maintenance (plus the following)
- Remove the blanking plug
- Carry out 100% surface NDE on all surfaces
- Pressure test to test pressure witnessed by certifying authority



5.3 Safety

- Many of the components are heavy and should not be lifted without lifting aids.
- Ensure all pressure testing is carried out in the appropriate testing area by suitably qualified personnel.
- Wear appropriate personal protective equipment.
- Do not over exert yourself while using torque wrenches. Use appropriate mechanical advantages when available.
- Ensure that all tools and equipment are in good condition and are suitable for the intended use.
- Clear up any fluid spills immediately to avoid slips.

5.4 Tools

The following tools are required:

- Circlip Pliers
- Wire Brush

5.5 Redress Procedure

5.5.1 Dis-Assembly

- Remove circlip and remove collar
- Remove 'O' ring and discard

5.5.2 Re-Assembly

- Fit 'O' ring to test cap
- Place collar over test cap and hold in place using circlip



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5.6 Maintenance Record Sheet

Date Performed	Type of Maintenance	Performed By	Verified By	Comments

Table 2: Maintenance Record

6 Testing

All testing is to be carried out in the designated test area and by suitably qualified and competent personnel.

WARNING: Trapped air requires considerable time to compress and when it is compressed is highly dangerous. It has enough stored energy to separate parts with considerable force.

- Fit appropriate test caps and blanking plugs
- Fill with testing fluid bleeding off any air within the system
- Apply a pressure of 500 psi and ensure pressure holds for a minimum of 10 minutes
- Increase pressure to 10,000 psi (Maximum Working Pressure), allow to stabilise and maintain this pressure until it is evident there are no apparent leaks. .(Testing to be carried out to Test pressure when decreed by maintenance schedule)
- Bleed off pressure, drain test fluid and dry
- Remove test caps
- Apply coating of de-watering solution to protect the bore and threads
- Fit thread protectors

On completion of all maintenance ensure the maintenance record sheet (Para 5.6) is completed



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7 Parts List and Drawings

Item Number	Part Number	Quantity	Description
1	180-2093-480	1	LIFT TEST CAP 11.5
2	125-2098-480	1	COLLAR 11.5-4 ACME
3	180-2193-STL	1	EXTERNAL CIRCLIP (SH-975)
4	801-0444-V90	1	O-Ring - B.S Size 444
5	915-2152-STL	1	Crosby Bolt Type Shackle – 12 Tonne SWL
6	900-2752-316	1	½" NPT Hollow Hex Plug
100	910-2153-N66	1	11-1/2-4 TPI ACME MALE PROTECTOR

Table 3:Parts List

Note: Thread Protector (item 100) not shown in assembly drawing Figure 2

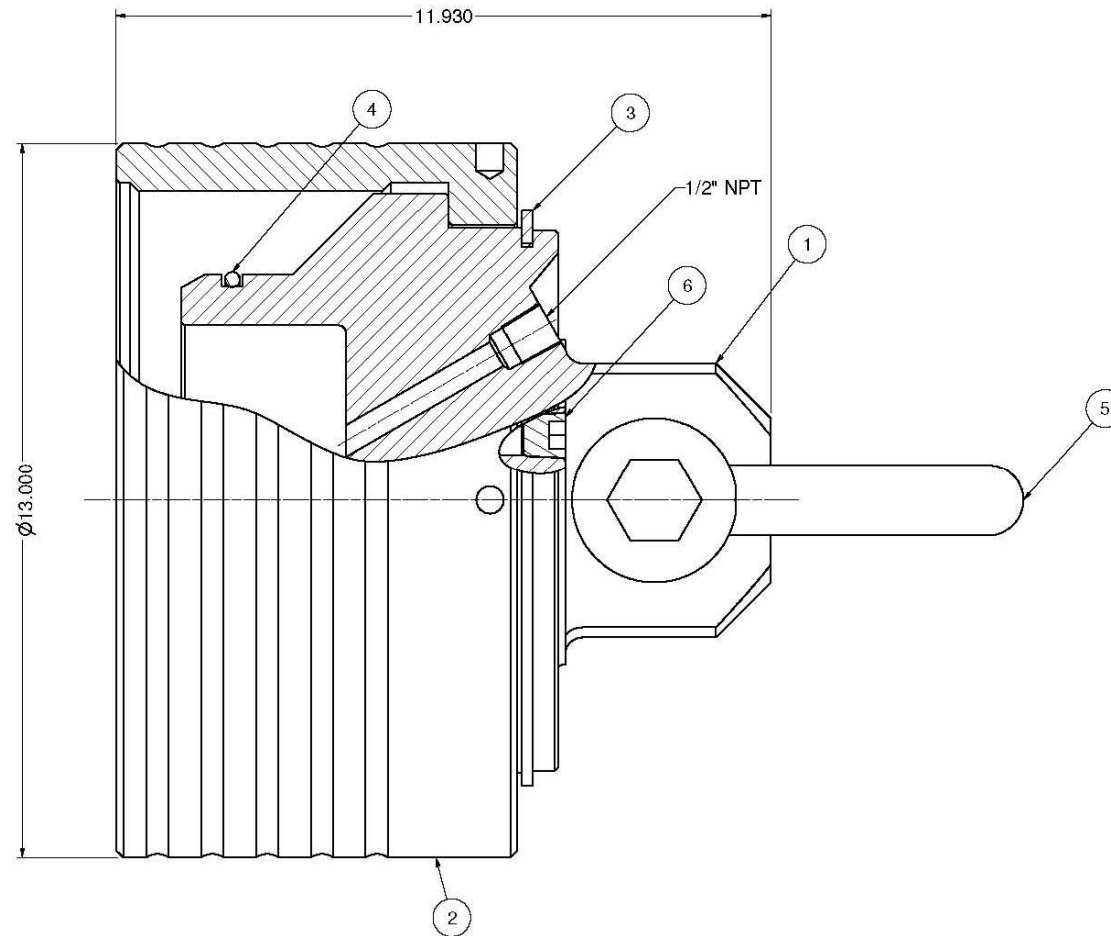


Figure 2: Lift Test Cap Assembly



8 Spares

Use only spares supplied or approved by Phuel Oil Tools Ltd.

It is recommended that sufficient quantities of the following spares be maintained to ensure that the equipment is always available when required.

Elastomeric spares are supplied in Viton material as standard. Many other materials are available please specify when ordering.

Part Number	Quantity	Description	Comments
801-0444-V90	1	O-Ring - B.S Size 444	

Table 4:Redress Kit Part No RDK-2192-HV0

8.1.1 Individual Items

Individual items may be ordered as required using the part number specified

Note: O-Rings conform to industry standards and may be substituted with those from other suppliers -- **at the sole risk of the user.**